

Environmental Health Assessment

And

Improvement Plan

Hudson County

2004

Prepared: November 2003

The Plan

This plan has been developed by the Hudson Regional Health Commission to identify the most salient environmental issues within Hudson County and to propose a plan to address these issues for CY 2004. The Hudson Regional Health Commission is a regional health commission established pursuant to NJSA 26:3 – 85 et seq., and is the certified local agency for the provision of environmental health services within Hudson County under the auspices of the County Environmental Health Act (CEHA).

The Community

Hudson County is a densely populated urban community, comprised of 12 municipalities, located in the New York metropolitan area. The County has a population of approximately 607,000 residing in its forty-six square mile area. The County contains 7.2% of the states population but only 0.6% of its land mass. With a population density in excess of 13,000 persons per square mile the County is the most densely populated in New Jersey and is one of the more densely populated counties in the nation. Population densities in some municipalities within the County exceed 40,000 persons per square mile. The citizenry is both ethnically and racially diverse (White non-Hispanic 35.3%, Hispanic American 39.8%, African American 13.5%, Asian American 9.4%). Median household income in the County is \$40,293 with 15.5% of persons below poverty level.

The housing stock of the County is primarily older multifamily residential buildings. 84% of the County's housing units are located in multifamily buildings with the majority of these in structures with three or greater units. Approximately ninety percent of all housing units were constructed prior to 1978 with 1941 being the median year of construction. The County is currently experiencing a boom in new residential and commercial construction, particularly along its easternmost border. Historically, Hudson County has been a center of industrial activity. Given its prime location with regard to transportation routes, waterways, and its proximity to New York City, Hudson County remains a center of industrial, commercial, and maritime activities.

Other than at its border with Bergen County to the north, Hudson County is surrounded by water. The eastern border of the county is the Hudson River. The Hackensack River and the Passaic River make up the county's western border with the Kill Van Kull being its southernmost border.

Local Environmental Issues

Given its dense population, past and present industrial uses, and situation as a major traffic corridor, Hudson County has its share of environmental issues.

Air pollution in Hudson County, not unlike other metropolitan areas is at times the County's most visible environmental issue. It originates from a mix of mobile, area and point sources with a significant contribution from sources outside the County. Though, exceedances of current National Ambient Air Quality Standards (NAAQS) are uncommon, the southern Metropolitan District of which Hudson County is a part, historically experiences 50% fewer good air quality days than the statewide average. Recently, it has been recognized that ozone and particulate matter may pose health risks at levels below those currently set as the NAAQS. New standards have been formulated and adopted but are presently not in place due to a legal challenge. It is unlikely that Hudson County as well as other areas of New Jersey would be in compliance with these standards. In the year 2003 to date, the NAAQS 1 hour average standard for ozone was exceeded on 1 day. The proposed 8 hour ozone standard was exceeded on 2 days as compared 6 days in 2002. Exceedances at other sites ranged from 2 to 10 for the year to date.

Hazardous air pollutants (HAP's) or air toxics continue to be a concern in Hudson County. NJDEP compared modeled air concentrations (based on 1996 emission data) of air toxics to health benchmarks and found exceedances of the benchmark for 17 of the 33 compounds evaluated. This is a slight decrease in the number of exceedances based on earlier analysis of 1990 data in which there were modeled exceedances for 23 compounds. Emissions of these compounds cannot generally be attributed to individual facilities but rather emanate from area and mobile sources.

It should be noted that this analysis is based on modeled data. In a previous pilot project with NJDEP, Hudson Regional Health Commission identified some risk estimates that may have been based on incorrect assumptions with regard to HAP emissions resulting in modeled HAP concentrations that are unrealistically high. However, other estimates, such as that for tetrachloroethylene, may be realistic since numerous emission sources of this compound exist in the county.

As a major transportation thoroughfare, Hudson County is notably impacted by

mobile sources of pollution, particularly those associated with diesel powered vehicles. Clearly the evaluation and control of air pollution is one of the most salient environmental issues within Hudson County.

Hudson County, with its century old industrial base, has been the site of significant industrial contamination prior to the advent of modern pollution control practices and regulation. Fortunately, in recent decades, the most egregious examples of this contamination have been addressed. Likewise many of the sites of less severe chemical contamination have also been addressed. However, this industrial legacy of chemical contamination remains present at many sites and must be addressed. Despite current pollution control practices and regulation, discharges of hazardous substances due to accidents or mechanical failures still occur, and yet still, there are individuals who choose to ignore or remain ignorant of accepted hazardous substance handling and disposal practices. Thus, the control and prevention of current discharges and the remediation of historic discharges of hazardous substances remain a prominent environmental issue within the County. The Commission will continue to maintain a well trained hazardous materials response staff that works closely with fire department based Hazardous Materials teams. During 2003, the existing fire department based Hazmat teams, Bayonne, Hoboken, and Jersey City have entered into interlocal agreements with the Commission and have agreed to conduct their operations under the auspices of the County Environmental Health Act.

Excessive noise is, perhaps, one of the most vexing environmental stressors an individual may experience. A densely populated urban environment with its intimate interface of residential, commercial, industrial, and transportation-related activities is often a noisy environment. Such an urban area undergoing a massive boon in new construction has even greater concerns. The prevention of excessive noise and its resolution where it exists will likely always remain an ongoing environmental issue in the urban environment that needs to be addressed with vigilance.

There are many other issues too numerous to elucidate upon at length in this context that warrant no less a degree of priority. These include surface water quality, solid waste handling and disposal, and the intentional introduction of hazardous substances to the environment in the form of pesticide use. An emerging issue is the role of Local Public

Health / CEHA agencies with regard to Emergency Preparedness. Certainly, with their knowledge of industrial facilities, chemical agents, and public health matters overall, the CEHA agencies are in a unique position to provide vital support to those agencies charged with domestic preparedness. HRHC has always maintained a cooperative working relationship with emergency management officials. 2003 saw significant increases in this relationship which is expected to expand further in 2004.

Strategic Goals and Activities

Placing local concerns within the context of the strategic goals of the NJDEP set forth in its performance partnership agreement with USEPA, the authority delegated by NJDEP pursuant to CEHA, and NJDEP priority activities for CEHA, the Hudson Regional Health Commission recommends the following strategic activities:

Goal: Clean Air

Milestone: By 2007, air throughout the State will meet national Clean Air Act standards for ozone and other air pollutants.

Activities: Continue to inspect minor and B source air permitted facilities to determine compliance with the State's air pollution control regulations, with emphasis on inspecting at least 20% of gas stations. .

Continue to conduct inspections at potential facilities that may require air pollution control permits as needed.

Conduct complaint investigations as referred by citizens and NJDEP. Implement actions to have the source of the complaints corrected when validated.

Participate in a pilot project with NJDEP to enforce visual emission standards with regard to diesel powered vehicles if implemented.

Participate in NJDEP sponsored air toxics projects as requested. (Pilot if funded)

Implement an enhanced idling enforcement program in areas where idling is a problem. (Pilot if funded)

Deliverables: a) Submit all compliance monitoring inspection reports to the NJDEP's Minor Source Compliance Investigation Program within 60 days of completing the inspection.

b) Forward records of enforcement actions to the appropriate NJDEP office in accordance with protocols.

c) Forward documents for pilot projects in manner and timeframe requested by the sponsoring entity.

Milestone: On an ongoing basis, citizens will be protected from exposure to excesses of hazardous air pollutants from sources that can be identified and controlled within the limits of delegated authority and appropriated resources.

Activities: Participate in the air toxics projects as established by NJDEP.

Report any previously unidentified significant sources of air toxic emissions to NJDEP.

Continue to conduct inspections and outreach efforts in dry cleaners, a known source of tetrachloroethylene emissions, to ensure that all emission control measures required by USEPA and supplemental to those of NJDEP are implemented. Make referrals of repeatedly non-compliant facilities to USEPA for enforcement.

Deliverables: a) Submit all compliance monitoring inspection reports regarding dry cleaners to the NJDEP's Minor Source Compliance Investigation Program within 60 days of completing the inspection.

b) Maintain and submit records regarding additional compliance and outreach efforts at dry cleaners to NJDEP and USEPA as requested

c) Submit deliverables for each phase of the air toxics inventory pilot project to NJDEP as required.

Goal: Safe & Healthy Communities

Milestone: Exposure to environmental risks will be controlled and minimized.

Site Remediation Program / Emergency Response

Activities: Respond to all hazardous material emergencies referred by NJDEP, local officials and others to assess environmental health threats and advise

hazardous material response units accordingly. Make recommendations to and coordinate these response actions with appropriate federal, State and local agencies. Ensure that personnel assigned to respond to hazmat incidents are properly trained and participating in a medical surveillance program.

Investigate hazardous materials complaints received from local officials, citizens and NJDEP. Refer cases requiring remedial action to NJDEP.

Participate in a pilot project to conduct comprehensive inspections of regulated underground storage tanks (UST's) to determine compliance status. Reinspect regulated UST's every three years as resources are allocated. (If funded)

Participate in a pilot project to provide oversight of the remediation of leaking residential underground storage tanks as a benefit to local residents. (If funded)

Identify the precise locations of select Brownfield sites using GPS as requested by NJDEP or the Hudson County Brownfield Pilot Project.

Enhance preparedness to assist public safety officials with the response to and assessment of actual or suspected releases of chemical and or biological agents. (If funded)

As requested, assist public safety and emergency management officials with assessment and evaluation of risk to the population should certain chemical facilities and transportation routes are the targets of sabotage or terrorism.

- Deliverables:
- a) Maintain compliance with PEOSHA health and safety requirements.
 - b) Follow NJDEP guidelines and protocols for UST inspections.
 - c) Submit completed inspection reports as required by NJDEP.
 - d) Follow NJDEP notification protocol and submit investigation reports as required to NJDEP.

Pesticides

- Activities:
- Conduct routine inspections of schools, restaurants, multi-unit dwellings and commercial landscapers, to determine compliance with the Pesticide Control Regulations. (if funded)

Perform complaint investigations and collect samples at the direction of NJDEP.

Undertake a pilot project to investigate illegal pesticide use and distribution. Educate the public to help decrease the use of illegal or dangerous pesticides in homes. (If funded)

Participate in a pilot project to educate custodial staff at schools to use Integrated Pest Management (IPM). (As funded)

Deliverables: a) Submit completed inspection reports and/or NJDEP checklists to the NJDEP Pesticides Program for review and approval. (if funded)

b) Conduct appropriate outreach activities and reports with regard to the IPM pilot project. (if funded)

Solid Waste Program

Milestone: To achieve and maintain the safe management of wastes in an environmentally sound manner.

Activities: Continue to investigate all solid waste complaints received from citizens and NJDEP.

Conduct routine compliance monitoring inspections of Class A recycling facilities and continue to update the list of these sites and provide to the NJDEP. As requested, conduct inspections of contaminated soil reuse sites.

Continue to monitor solid waste haulers to ensure compliance with the Solid Waste Management Act, and conduct interviews of transporters referred by NJDEP.

Continue compliance monitoring inspections of all other delegated solid waste facilities.

Monitor storage of scrap tires to determine compliance with storage of tires in accordance with the Solid Waste Regulations. Take enforcement as needed

Conduct *greenstart* compliance assistance inspections at DPW yards to proactively identify potential environmental problems.

Assist the Hudson County Improvement Authority, as requested, with the operation of its Household Hazardous waste Collection Program.

- Deliverables:
- a) Enforce the State Solid Waste Management Act and initiate enforcement proceedings pursuant to NJDEP guidelines.
 - b) Provide a listing of tire stockpile sites in GPS format.
 - c) Submit appropriate surveys of DPW yards inspected.
 - d) Conduct facility inspections at the required frequency.
 - e) Submit reports as required by NJDEP.

Noise Control

Milestone: Control noise that unnecessarily degrades the quality of life and/or affects the health and safety of people in Hudson County.

Activities: Investigate noise complaints received from citizens and the NJDEP that are under the jurisdiction of the Noise Control Regulations, and if applicable, enforce these regulations to achieve compliance.

As requested by local officials and others provide guidance on noise regulations and noise prevention and abatement.

- Deliverables:
- a) Maintain records of all complaint investigations.
 - b) Submit reports as required by NJDEP.

Goal: Clean and Plentiful Water

Water Compliance & Enforcement Program

Milestone: Control pollution emitted to the waters of the State.

Activities: Investigate all water pollution complaints received from citizens and NJDEP.

Identify those facilities not currently served by municipal sewers and assess whether their septic handling practices are adequate.

Continue pilot project monitoring of bacteriological quality of surface waters. (If funded)

Deliverables: a) Submit all completed reports as required by NJDEP.

GOAL: OPEN & EFFECTIVE GOVERNMENT

Encourage and develop strategic partnerships with other local, state and federal agencies, nonprofit organizations, environmental commissions, the general public, and the business community to address environmental issues and concerns.

Activities: Maintain an active role, as appropriate, in the recently implemented partnership agreements between the NJDEP and Hudson County and NJDEP and Bayonne.

Continue involvement with the Hudson County Brownfields Demonstration Pilot Project.

Continue existing relationships with all municipal health departments, other local officials, and local LEPC's.

Provide assistance and information to individuals, citizen groups, environmental commissions and the regulated community as requested.

Maintain a website (www.hudsonregionalhealth.org) to allow ready public access to information regarding the commission and local environmental health issues.

Emerging Issues

Goal: Safe and Healthy Communities

Emergency Preparedness

The Hudson Regional Health Commission maintains an intimate working knowledge of the majority of facilities utilizing and transporting hazardous substances in Hudson County. Some of these materials can be classified as “extremely hazardous” and if released in substantial quantity could pose a grave threat to the citizens of Hudson and adjoining counties. Such facilities, in the current circumstance, could reasonably be viewed as potential targets of terrorist activities. If appropriate resources are allocated, the Commission could readily work cooperatively with LEPC's and Public Safety

personnel in the identification of these facilities; evaluation of the magnitude of the threat to the population; and the identification of measures that may be implemented to mitigate these threats.

Additionally, the Commission historically served as the primary hazardous materials response entity within the County. With the evolution of three fire department based HazMat teams, the Commission continues to serve as a key technical support liaison for incidents in which those entities are involved and provides key support for various monitoring and risk assessment functions. The Commission is currently in the process of obtaining equipment suitable for the identification and characterization of many of the chemical and or biological agents that may be employed in a domestic attack. Equally important is the ability to distinguish a real threat from a hoax or release of a more benign agent. Even perceived threats or hoaxes enact a significant toll on the function of our society and have placed severe demands on public safety resources. Public and environmental health personnel with appropriate resources can clearly support the activities of those charged with public safety.

Mercury

The illicit sale and use of certain pesticides in some urban communities has been recognized as a priority area of concern. Perhaps equally disturbing is the ritualistic use of mercury in certain Afro-Caribbean religious practices such as Santeria. In this practice mercury may be sprinkled around a household or “burned” in candles, resulting in the distribution of mercury in the home and the environment. Cases of “mercury poisoning” have been documented in the scientific literature from spills of mercury associated with these practices. Based on conversations with individuals familiar with the practices, mercury or “azogue” as it is called is used and is available within portions of the County. The Commission participated in a research project in conjunction with the NJDEP Office of Science and Research entitled “Cultural Uses of Mercury in New Jersey” to begin evaluation of this issue. Preliminary findings indicate mercury concentrations to be significantly elevated indoors as compared to outdoors and that some buildings have mercury concentrations that may be consistent with prior spills or cultural mercury use. A

copy of the project is attached as an appendix or may be found at <http://www.state.nj.us/dep/dsr/research/mercury-cultural.pdf> . This issue is unlikely to be endemic to Hudson and certainly warrants continued investigation to evaluate the extent of these practices, the potential hazards posed, and the development of measures to control the practices in a religious and culturally sensitive manner.

Hazardous Air Pollutants

Certain activities related to Hazardous Air Pollutants (HAPS) such as the air toxics pilot projects have deservedly been designated as a priority issue. The issue of Air Toxics emissions from dry cleaners has not been thoroughly addressed. Drycleaners emit tetrachloroethylene, which is a hazardous air pollutant. Recent studies have shown that occupants in buildings co-located with dry cleaners may be exposed to concentrations of tetrachloroethylene that are of public health concern even when the facility is in compliance with existing NJ regulation. This study may be found in Attachment 1. The Hudson Regional Health Commission recommends that the NJDEP consider the implementation of a pilot project to further explore and identify potential measures to address this concern.

Given the level of concern generated by EPA's predicted concentrations of HAPS, the Hudson Regional Health Commission suggests the NJDEP consider a pilot program to conduct periodic assessments of air quality with regard to hazardous air pollutants. Such assessment could take the form of the collection periodic "grab samples" which would be submitted for analysis of targeted compounds. Despite the fact that this type of sampling would not provide a comprehensive picture of ambient HAP concentrations, it would provide a cost-effective source of some data that could be compared to the estimates. Presently, there is a void of data in this area. The Commission would be willing to participate in such a pilot if funded.

Clean Water

In recent years there has been resurgence in the recreational uses of the rivers and harbors within the County. Much of the recreation is non-contact such as the use of larger power and sailboats. However, one can now find kayak and canoe rental facilities along the area

waterways, and jet skiers “buzzing” the Statue of Liberty are not rare. The fact that these waterways are being used for recreational purposes had been somewhat ignored. A water-quality monitoring program, to gather baseline data was conducted in 2001 and 2002 and its continuation appears to be warranted. Data for the 2001 period has been tabulated and provided to NJDEP, the Watershed Management group and others as requested. It is believed this information has provided useful information regarding water quality in the area. 2002 data is still being tabulated as of this report, however, good bacteriological water quality continues to be noted on the majority of sampling episodes. The Hudson Regional Health Commission would be willing to continue this program with NJDEP support.

Resources and Partnerships

Currently, Hudson Regional Health Commission maintains a full time staff of which seven are field personnel. The Hudson County Improvement Authority (HCIA) and the commission have an interlocal agreement that delegates the HCIA authority to conduct certain solid waste enforcement activities. Similar agreements exist with the municipalities of Hoboken and North Bergen in this regard. It is intended that these agreements will be renewed when required.

These resources have been adequate to conduct mandated program activities. While certain program areas certainly warrant expanded activities, in general, a significant expansion cannot be conducted without the funding to provide for staff and equipment to conduct the activity. Overall, funding for personnel to conduct environmental health programs has remained static for close to a decade. Given steadily increasing costs, stable funding has resulted in a net decrease in essential personnel over time.

Attachment 1

Journal Article

“Factors influencing tetrachloroethylene concentration in residences above dry cleaners”

Attachment 1

Research Project Summary

“Cultural Uses of Mercury in New Jersey”